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Vol 4 No 44

BBC sales block

ACCORN'S troubles in the high street have coincided with news that, when existing Acorn machines are sold, none of the major chain stores at present plan to offer the BBC or Electron over Christmas, with the exception of Dixons/Carrys.

The original BBC B model is also now virtually unsaleable, leading to speculation that the model has been discontinued. This suggestion, has been categorically denied by Acorn.

The Dixons/Carrys group is now the only large chain to stock the Electron - at a special pack price of \$99.99, which includes a data recorder and software.

The independent specialist retailers still stocking Acorn machines are largely loyal to the BBC Plus 64K and 128K micros. They are now finding it increasingly difficult to obtain BBC B's and Electron's.

"The standard 128 BBC will sell very well, but it is extremely difficult to get them because Acorn doesn't seem to be making them any more," said one dealer. "Also, there's not a lot of point in buying Electrons since Dixons is selling them at \$89 up the road."

This view was reinforced by another retailer: "I can't get the BBC BBC B for love nor money - Acorn seems to have stopped manufacturing them.

I haven't been able to get hold of the 128K model yet either, but I'm planning to stock it."

"It is not true that we have stopped making the BBC B micro," said an Acorn spokeswoman. "And I would have thought it surprising if high street retailers are not going to buy Acorn machines for Christmas."

Dealers are also concerned at the closures in

continued on page 8



The Amstrad Graphic Adventure *Creative from Incoherence* works in similar fashion to the Quill, but

both graphics and text can be generated from the same package. It costs \$22.95.



MICRO MAGIC



Find out if you have won an Amstrad £100 this week or at least some special Popular Computing Weekly cassette labels. Enter your personal Micro Magic number into our special computer program on page 8.

THIS WEEK'S NEWS

- 1570 DISC DRIVE ARRIVES
- RUMBELOWS DROPS SPECTRUM

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EDITORIAL

Why is the question of whether the BBC should take advertising such a sensitive one? After all the BBC has been carrying advertising for its own products - BBC publications for example - for years.

Take its involvement with Acorn to produce the BBC micro. Undoubtedly the arrangement helped promote computer literacy. But it also boosted the BBC's profile through substantial royalty payments on every micro sold.

Even now the BBC's frequent programme coverage of a product with which it has a commercial involvement continues. Not just in micro shows either - the BBC micro still crops up in all sorts of programmes across the network's output.

Tell what is the business interest in Acorn doing for the BBC?

Not a lot. Surely it must at least raise questions about the BBC's

editorial impartiality. And now, mainly through Acorn's own much publicised financial difficulties the link is becoming almost an embarrassment. Acorn's products are no longer widely available in the high street and sales have plunged because Acorn has pulled itself right out of the market. Further, there is little sign that Acorn either has the resources or has any particular wish to provide an on-going family of new BBC micros. Why are there now three BBC models competing only with each other and all widely unaccepted? Acorn's strategy for the home computer market is a shambles.

And the BBC is now looking out all round. It should have quietly dismantled itself from the Acorn agreement long ago when its computer literacy project was still bearing substantial fruit.

But then, presumably, the money looked too good to turn down. Now even that looks like drying up.

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'The Enterprise gives a musician much greater flexibility in the production and arrangement of music' — pro-musician Robert Hartshorne

Drive and monitor for C128 emerge

COMMODORE's new 128 micro has at last gone on sale with the disc and monitor peripherals required to use the machine to the full - and already prices are being dismantled.

The 1870 disc drive and

1901 monitor units were available for the first time at the Commodore Australia Show held at the Tech West Centre in London last weekend.

Although the official prices for the discs, disc drive and monitor have now been set at

\$299.99, \$199.99 and \$299.99, respectively, Commodore's dealer at the show, Outronics, was offering the hardware at special show prices of \$250, \$150 and \$220 for discs, drive and monitor.

Despite the price reduction, bringing the micro/plus drive/monitor combination down by over \$40 to \$721, this is still over £300 more than Amstrad's CPC 4128.

The Commodore Australia Show was well attended with the number of visitors to the two-day event estimated at well over 7,000.

Sinclair to 'badge' QL printer

SINCLAIR has now signed an agreement to 'badge' a Seikosha printer for the QL.

The printer is the same model as the unbranded one which was shown at the Personal Computer World show, and will be officially launched at Compex, from November 18-19.

The printer is a 9-pin dot-matrix type, with a draft speed of 100 cps and near letter quality speed of 30 cps. It will take both continuous and single sheets of paper.

Data Translations will be selling the printer, in black ivory, for £249.

Holiday package row sparked by Benidorm

PART of Melbourne House's package holiday adventure Terrormolinos may be interested to hear of another title with a remarkably similar plot - Benidorm from Little Lollie software.

The Benidorm was written and released on mail order nearly two years ago and Terrormolinos was only launched this summer.

In Benidorm's landy, father Cyril, mother Beryl, and children Wayne and Joanne set out for their destination from their home in Slough. In Terrormolinos, the mother too is called Beryl and she and children Ken and Denise also live in Slough. Other features shared by Benidorm and Terrormolinos include drunken characters and food poisoning, and both programs can handle postcard-style artwork on the packaging.

"We were Benidorm simply as a spoof, our main line of business being bespoke medical software," said Beryl Curvey of Little Lollie. "The

anymore that the Terrormolinos people are claiming their idea is totally original."

"I have never heard of this other game," said Peter Jones, co-author of Terrormolinos.

"Obviously Little Lollie must have thought up the same concept - certainly if you start planning an adventure game set around a Spanish holiday, because of it will fall into place. We may have thought of it first at not - we had the idea planned before Hangover appeared."

"I can assure you we published Terrormolinos in good faith," said Melbourne House's Paula Sykes. "I have absolute confidence in the authors."

Terrormolinos is available for the Spectrum and C64 at \$6.99 from most shops. Benidorm is available for the C64 on mail order only from Little Lollie at 4 Drummen Hill, Slough, W. Yorks, for £7.99.

L: Terrormolinos artwork.
R: Benidorm label.

Rumbelows drops Spectrum as stores plan Xmas ranges

RUMBELOW'S has become the last high street store to discontinue sales of Sinclair's computers.

It will not make a decision as to whether to re-stock either the Spectrum Plus or QL until after Christmas.

Rumbelows' Christmas range comprises the Amstrad CPC 464 and 6128, Toshiba's C64 HD-10 package, the Commodore 64 Compendium at £128, and the Commodore 128.

The decision not to take the Spectrum Plus over Christmas has a lot to do with Datasoft's £129.99 Spectrum Plus package. "Datasoft seems to have tied up that particular size of the market," said Rumbelows' buyer Terry Greenwood. "We have still got a fire in stock but we're not going to do a deal with Datasoft."

Most of the other major retail chains, including Boco, Lasky's, Mervin and W H Smith, are offering Spectrum Plus packs, very similar to Datasoft's, for sale over the Christmas period.

Boco will also be stocking the QL, Amstrad CPC 464 and 6128, the Commodore Compendium, Toshiba HD-10 and

Amstrad 1300E over Christmas.

The Commodore 128 will be sold only in Boco's top 20 stores. Lasky's is stocking the Amstrad 464 and 6128, Toshiba HD-10, Amstrad 1300E, the Commodore Compendium and the C128. Lasky's hopes to offer the C128 in two separate packages, one with the 1870 disc drive and one with the disc drive plus Commodore's 1901 monitor. John Mervin will offer a printer pack for the QL, featuring Seikosha's CPL printer for £299.99. The CPL will also be available on its own at £199.99. Mervin too has the C64 Compendium, Amstrad's 464 and 6128, and interestingly is hoping for some PCW 8008s for Christmas. W H Smith has the C64 Compendium, Amstrad 464 and 6128. Datasoft/Curvey is the only major chain to offer the 66C and Electron machines, in addition to its Spectrum Plus pack, Commodore Compendium and Amstrad 464, 6128 and 6224.

**More news
on page 9**





WATCH OUT! IT'S



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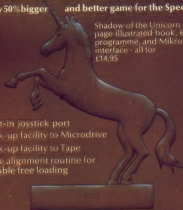
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Success of PCW8256 threatens shortage

AMSTRAD's new PCW 8256 looks like being in very short supply this Christmas as demand outstrips supply.

Although the word processor uses 128K micro has only gone on sale as late as December and some independent shops, who are already "nearly into five figures", according to one spokesman.

He said, "It's a 100% undeliverable machine. It has sold out and created waiting lists all over the place. Most people should get their PCW 8256 before Christmas, but it's impossible to tell really."

The success is also threatening to cause a shortage of 3 inch discs. "People keep buying two boxes of discs at a time. We are just about keep-

ing control but it is a tight situation."

At the launch of the PCW 8256 in August, Amstrad planned to produce 35,000 units of the machine this autumn, and stipulated it would be entering both marketing



and supply to availability. "The PCW8256s are pre-sold before we get them into stock," said Loretta Cohen of distributor Lightning. "There certainly won't be ample stocks of the machine in the next few months."

The Big Apple holds firm

APPLE Computer has announced preliminary financial results of net profits of \$61.2m (about £40m) and sales of over \$1.814b (\$1.425b) for the year ending September 1988.

Sales are slightly up from 1987, when they totalled \$1.516b (\$1.193m) but profits are marginally down from \$64.1m (nearly £40m).

About a third of the profits were earned in the last quarter.



"Yes, but what you've seen is just a demonstration, you've seen them all!"

Diving deep into the C

LEON Heller - the chairman of Quantum, the UK users' group - is setting up a national C user's group, for those interested in the programming language.

Details from Leon Heller, 5 Morris Way, Newport Pagnell, Bucks, MK26 6DD.

Acorn trouble

• continued from page 1

price between the 64K & Plus and the 128K model. The 64K sells for £489 and the 128K for £499.

"We're expecting an up-grade kit to be made available at a small cost for the 64K," said a dealer in Avon. "Now that the 128K machine has been launched, interest in the 64K has died down."

The Acorn spokeswoman confirmed the existence of the 64-128K up-grade kit: "It is now available for about £20 and the up-grade is carried out by the dealer," she said.

Micro Magic



Popular cassette labels

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Micro Magic



The Amstrad CPC8158

We are giving away an Amstrad CPC8158 128K micro - worth £399 - every seven days until Christmas. Not only that, but every Micro Magic card is a winner - every card wins a runner-up prize of free Special Popular Computing Weekly cassette labels

How to find out if you win this week
To find out if you are a prize winner this week this is what you must do:

1) Key in the computer program listing printed here into your micro and run the program.

2) Input your special Micro Magic number on to data in the program when requested and press Enter.

3) The program will tell you if you have won a prize this week and what it is.

4) If you have won a prize you can claim it by filling in the coupon on the back of your special Micro Magic card. Then send



Micro Magic Week 1 Program Listing

the completed card off to Micro Magic, Popular Computing Weekly, 12-13 Little Newport Street, London WC2H 1PP.

Don't forget to fill in both your name and address, and also both your winning Micro Magic number from this week and your special Micro Magic number.

5) If you haven't won this week, don't give up hope. Keep your Micro Magic card and use it to find out if you win with next week's Micro Magic computer program. The same card will test you right through to Christmas, so don't throw it away - you could miss the opportunity to win.

This week's winning Micro Magic Numbers: 573640 and 336952

If you think you've won complete the form on the back of your Micro Magic card and send it to: Micro Magic, Popular Computing Weekly, 12-13 Little Newport Street, London WC2H 1PP.

Micro Magic cards can only be obtained in the UK and the winners selected by Post Office Randomisation are entitled to only one card each. Cards not corresponding to Randomisation will be discarded. Prizes are available in the UK only. (The Newport Street office is in London, EC2A 3PP)



Word power

Program: Proton Amaze
Micro: Amaze
Price: £18.95
tape, £26.95 disc, £28.95 from
Supplier Amaze The Studio,
Leisure Place, Graydon,
Bury CRO 1ET

With Proton Amaze sets out with the intention of improv-

ing any CPC word processor available to date and it has done an extraordinarily good job of it. The only professional level competition comes from Tarnward on CP/M programs.

The disc version of Tarnward has a super real merge facility, a spell checker, support from character redesigning programs for Egnon and Amulet printers and has also been released in

a new version that uses the 6128's extra memory. None of these extras are yet available to Proton but they have been promised and in almost every other way there is a tangible increase in power under Proton.

One of the noticeable points is speed - paragraph reformatting for example is almost instantaneous. Secondly almost every command is flexible - you can save and print blocks of text, merge text at the cursor position, find and replace can be case independent or specific, global or local, backwards or forwards, words only or strings within words.

Printer control commands such as line spacing or page length can be embedded in the text, as well as text formatting rulers, comment lines, messages that suspend printing until a key is pressed (or

prompting a busy wheel change for example), soft hyphens (they disappear if the word doesn't cross a line break) the list goes on.

I can't emphasise how good it is and the only feature that you be criticised is that if you have a line length approaching 80 you'll overwrite this by several characters before formatting it on to the next line.

The Rom version allows you 40K of free text file space (even on the £128) and frees you from having to waste disc space with working copies of the program. It is available in cartridge form for £20.00 extra or as a chip for insertion in any Amaze compatible Rom board. Don't miss it - it is superb!

Tony Meade



Head banger

Program: Fighting Warrior
Micro: Spectrum
Price: £7.95
Supplier Melbourne House,
Golf Yard House, Cusley
Yard, Richmond TW9 1HT

What does Egypt mean to you? Sand, camels, pyramids, sand, the old animated country and more sand? Well, Melbourne House is out to

prove otherwise with *Fighting Warrior*.

We're back in with the pharaohs with a plot concerning the rescue of a beautiful princess, but what really matters is that your figure is armed with a sword as he battles with assorted badmen on his sand dunes from hell to right.

This link with a stick has a similar, though slightly more limited, variety of movements to his oriental counterpart in *Exploiting Flat* he can duck and jump as well as swing

high mid and low blows. The varied opponents, which include a superb blocking dragon, seem to react with a degree of intelligence as they attempt to parry the attacks.

There being ancient Egypt there's a magical element in the shape of vases, the clearing of which may prove beneficial, as well as providing archaeologists with fragments to puzzle over in the future! And there are some Checkers! Bring arrows from off-screen right adding

to your problems.

With its superb animation and high playability this is another sure fire winner for Melbourne House's single-handed control direction, and it's even got the Spectrum to produce a reasonable amount of crumbling bones. While no so original as *Exploiting Flat* it should still have you bawling for hours on end.

John Mason



Dog dodge

Program: One Man and His Dog
Micro: Spectrum
Price: £7.95
Supplier Martinbrook,
4-10 Paul Street, London
EC2A 4PH

Att - I remember the old days when we had dogs and 'fenced' sheep and they made boring computer games about it for vast prices. Well now we 'as decide to treat the flocks and this 'ere game costs a lot less and it's a whole lot of original fun.

The problem with animals, in these computer games, is that they only live for twenty minutes, as it's a race against time, and your first problem



is to dodge across the field where they're all bounding 'ther and 'ether.

Once you've made the correct where they live you 'as to find them and round them up - in the right order, mind -

to the telegraph. You lot can get in before it's time and you'll live in just all over again.

Now these sheep dogs are as stupid as their earthbound cousins but luckily they tel-

low just two patterns of movement so you can usually guess where they'll go next.

Well, you'll need your dog's ability to dig 'oles and be so well and, in something still, so that 'e can direct them where you want them. And once you're cleared one cavern there's another one-time to go.

It's a good job though, calling for a fair bit of strategy. I don't mind saying that as shepherd's are incredibly underpaid it's a 'ere cheap you can buy us.

And now I'm off to listen to the Archers because old Davis' wiving a bit of trouble with 'is new neighbors from Almir 2.

John Mason



THE ULTIMATE GAMES FOR THE COMMODORE 64

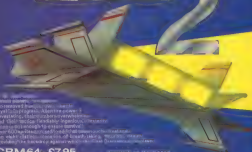


Sabre Wolf and Underworld are available on the Commodore 64 at 19-05 inc. VDF



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Space Pilot 2



At the beginning of the 21st century, the world has received a surprise visit from a mysterious, extraterrestrial power. It is revealing that our planet is not alone in the universe. Our mission is to explore the vastness of space and to discover the secrets of the universe. Our 600kg fighter jet is the most advanced in the world. It is equipped with a powerful engine, a sophisticated weapons system, and a highly advanced navigation system. It is the only aircraft capable of surviving in the harsh conditions of space.

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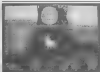


ANIROG

Space Pilot 2 is a fast-paced action game that challenges your skills as a pilot. It features a variety of weapons and power-ups that you can use to defeat your enemies. The game is designed to be played on a Commodore 64 computer. It is a single-player game that can be played on either a joystick or a keyboard. The game is available in both English and French versions.

For more information, contact ANIROG at 01-234-5678 or visit our website at www.anirog.com.





For the birds

Programs: *Orr and Cheep: The Birthday Party Micro Commodore* £15 £18 **Price** £2.95 **Supplier:** Macmillan Software, 4 Little Essex Street, London WC2R 2LJ.

Orr and Cheep are a double act with more the kindergarten than with their television names, which could explain my ignorance of their story. Orr is a worm (literally), while Cheep, his feathered friend, spends his time flapping and chapping.

Today is Orr's birthday and Cheep is flapping around and jumping instead of using his wings like any self-respecting bird. He has to drag the logbook into the right area, find his friends and eat them. On this showing, I wouldn't employ him in any social secretary.

With a little help from you he should succeed through... and Macmillan says the game will delight kids of all ages so don't try to share your responsibility. The first

bird's a dudde - just remember which of four just comes when. The search for guests - who probably run like mad when they hear Cheep's incessant chapping - is a journey along screens 32

paths and areas into the subterranean world of the roots. Gather the right friends and when you encounter the non-U animals, such as rat, cat or crow, you can scare them off. The last logic test is considered such that you have to do it twice.

Apart from my sympathy to the characters - and I'm sure I'll love Orr as I was seven again - the game is nicely presented. The instructions are useful and it took several readings before I even knew what to do. The middle section is the most interesting and introduces simple mapping to children but despite its clever use of single key inputs it seems to drag on wearily. By the time Cheep and Orr inside have shed a path even Orr will be pecking off.

The initial reaction tester, to determine difficulty level, is a good idea and the whole package could have been a useful arcade learning tool but it's unlikely to hold the children... and that applies to kids of any age. **Macmillan**
John Minnow



In tune

Programs: *Shadowline: Tunes Micro Spectrum/Commodore* £15 **Price** £2.95 **Supplier:** Beyond Software, Dartford House, Bartel Hill, London SE18 3QJ.

If like me, you are one of those people who absolutely loved about Shadowline, but lacked the necessary guile and patience to finish it properly by capturing Genesis Kid and saving Archbishop Eppox, or if you are a keen follower of Tony

Kendle's page and are waiting for him to come up with some Shadowline poems - well so rejoice, for here comes the sequel in the shape of the Shadowline Tunes.

This is a very clever marketing tool, because it lets you play around with the program changing almost anything you want, thus allowing kids to create their own gas against each other.

The whole 'tuning' procedure, like the main game, is icon driven and initially you are presented with the 'shop' screen which allows you to view the whole Shadowline Engine code. From this

Zat all?

Program: *Zyn Micro Commodore* £4 **Price:** £3.95 **Supplier:** Kallio 3-4 Vernon Yard, 128 Parsonage Rd.

I am not sure about this one: it's a sort of cross between Moon Puggy and Delandev! with some adventure and logic problems thrown in. The aim of the game is to penetrate the six levels of the planet Zyn to your combined truck and rocket to collect pieces of a bomb, which were assembled, will blow up the protective walls of the subterranean city, thus allowing you access through to shoot the now defenceless habitation into submission.

The bottom of the screen consists of the usual gauges for monitoring fuel, ammo,

objects earned, score and time, along with messages which tell you the amount of damage your ship is sustaining through bombs fired by flying into rock walls, which is almost impossible not to do. Next are electric charges which form the logic puzzles consisting of patterned squares, turned off by flying through them at full speed. The trick is to find out which squares turn off which patterns, because flying through a patternless square will turn it on again. All squares have to be black to allow you to continue past it's all rather confusing and the instructions aren't very revealing.

Graphically the game is quite nice, with some neat sound effects and large sprites and the price is very fair.

Andy Moon



Speed hills?

Program: *Moulder II Micro Spectrum* **Price:** £12.95 **Supplier:** PMS, 481 Honey Street Road, Coventry CV3 5DB.

The theory: While machine code appears like a hare, Basic creeps like a snail. A compiler produces code from the Basic program.

But against that, most compilers demand a much reduced Basic. They are unable to convert every Basic command into code, often distorting features and using handling. *Moulder II* claims to handle virtually the whole language, so that off the peg Basic programs can be speed up.

When you decide where to place the objects and characters in the game and change the characteristics of each. For example, the weight of every item can be adjusted, percentages can be added and patrol routes changed along with doors both locked and unlocked.

When you have your own set up, the standard Basic game procedure can be used to enable you to load it into the game in the usual way.

Loading is in two stages to check Basic then transform it, errors necessitate reloading of both the source and Moulder.

The practice: What better way to test these claims than to run off a book of settings and type in a hundred tortoise-like arcade games? Mysteriously later I'm ready to emerge but Moulder isn't. Try as I might I can't see why it won't handle a High Score Table.

There's no help in the source documentation, and while some programs had an appreciable speed increase, this thoughtful attitude is error trapping aside what is probably a good choice - it's hard to believe, poster PMS.

John Minnow



Files created by the Tunes are fully usable and interchangeable with those created by the Shadowline program, as a previously saved game can be modified.

Personally, I intend to do away with all the guards so I can have the satisfaction of making Moulder straight to Hell and winning the easy flag.

Andy Moon





Chik, toosh, shak!

Hardware: Spectrum Micro Spectrum Price List. Supplier: Cheats Marketing, 1 Willowbrook Science Park, Cranberry Road, St. Malons, Cardiff.

Cards on table time. I am biased towards all things musical on this site because it seems to me to be one of the genuinely fun things anyone can do.

Whence it is now quite cheap to get pressed a useful little Casio keyboard. The plastic drum sounds are usually accurate. Almost without exception drum sounds on the cheap keyboards are so inaccurately wonderful, slight and plastic sounding that only those people whose ultimate objective in musical life is to play *When the Center Co. Marching* is to find it satisfactory.

University, through, contact with the
children can now now 2000 plus.

Clasch has now produced an answer. Spectra gives you, in conjunction with a SPECTRA 48 spectrum display machine that uses sampled memory (not stream digitally recorded) which can be played either in real time or notated using a single screen editor screen.

The Spokenix system comes with a 'kit' of eight sounds - bass drums, high hat, open, high hat closed (chick) and snare (respective) hand claps (clap), snare (snare), cymbal (cymbal), and tom (tom), low tom (tom) and hand claps (clap). Up to three of these sounds can be used simultaneously but in fact the structure of

everything happening at once is quite possible with a bit of smart programming around the house.

The software that gives you control of all this is mainly excellent. The display as you choose a song to work on and name it, making either from scratch or loading in saved drum patterns from tape. Composing a song (which results in an ordered sequence of different parts) is a matter first of choosing the individual drum sections then sequencing the completed patterns according to the format of the music you want to use. *Drum Solo*.

The pattern creation section works in two ways. You can either work in real time, choosing and inserting each different piecewise line and building up a complete pattern over a specified number of lines or you can enter each line using various keys on a simplified equivalent of a musical staff.

The cardinal part of all this is that the real time and resource ways of working are completely unvarnished - your real time drum inputs are automatically required for you so it is possible to run the different kinds of inputs easily. This means that the way-to-play has like a regular music piece can be quickly applied out in real time and these widely available bits can be creatively assessed.

The individual parents are then 'killed' and numbered and then saved to disk.

The only criticism I have of the software is that there are some scenarios where you go into sub menus and discover that options that are not currently available are on the screen, eg. often options to the drum play a show, but pressing it won't do anything and you have 'returned' from some sub menu. It's basically a small point.

The signals are amplified and it does help if you have a decent amp or hi fi. You'll still need some sort of amplifier whatever you do through - the Spectrum sends its control signal out via a standard phone lead.

There is promise by Chevrolet too. Its other accounts on tape last showed it in gear for a totally different kind of drive action.

You can even synchronise your program to other instruments - it will produce a clock impulse into the Spectrum Mic socket. This pulse - put into a multi-track on an 8 to tape could form a nice track to trigger Sequencer but the manual is unfortunately very vague on this point. I think you'd need a sync box though - the manual is not helpful on this point and I'd have welcomed a (a) more explanation.

This peripheral should be treated with restrained glass by Spectrum using water bath.

A discount drum machine for \$29.99 (includes)

Turbo or not Turbo

Hardware Turbo 50 cartridge M8-
cro Commodore 64 Price £39.99
Supplier Robsons, 38 Market Place,
London NW1 1 8P 01-269 0016

In a sense this isn't a hardware product at all, since the Turbo devices are simply standard Commodore-type ROM cartridges. The routines they contain, however, are something special: a range of utilities and new Basic commands which transform the C64

The Turbo-range consists of five cartridges. Turbo 30 is a combination of the other four, which contains all the utilities available in the range.

Turns 50 use no battery, and will not interfere with 25% of Commander's programs. Should it be necessary, you can use Out 11 to deactivate the cartridge, without having to disconnect it from the cartridge slot.

Typing *show* brings up a menu of all the new commands available in several sections. The basic editor is impressive enough, including preprogrammed function keys along *Arrows*, *Quit* and *Yes*, and so on. *Auto-line number*, *Default line*, *Find string*, *Highlight error*, *Review old programs*, *List by page*, *Remember*, *Change screen colours*, *Key for command*, *Auto key repeat*, *Save*, *Trace*, and *more commands*.

The last cassette routine allows users programs to be saved in a form which will load up to ten drives faster than normal, a boon to programmers led up with the reference Commodore data cassette. There's also a Merge facility for combining sections of programs. Fast disk Save/load routines, a command to get a disk directory, format a disk, scratch a file, rename files, validate disks and read the drive are included, as are commands to change device numbers.

That's just the start. Other commands include `Comserve` graphics software, `Living` you to use your OS/2 with a non-Commodore printer, a `Doc` command to show you to define the volume width and translation values for the Commodore graphics character. There's also a machine-code memory with over thirty commands, which mean only one.

... means that there should be something in there which will be of use to any computer 48 user. For the cost, the Turbo 20 seems the best option even though the others are cheaper. Turbo 10 seems everything but the best disc system and monitor. Turbo 20 has just the monitor. Turbo 30 has everything but the Contention software and monitor. Turbo 40 has everything but the best disc system, and Turbo 60 has the best

The Turkey series goes a long way in circumventing many of the limitations of intermediate Basic. First and foremost,

Showering Technique

1000

No toy

Hardware *Amx Mouse Micro Animated CPC range Price £70 Supplier Advanced Memory Systems, Crown Lane, Appleton, Warrington, WA1 0NG*

The Amx mouse system, made to first appearance for the BBC micro and its transition to the Amstrad is not surprising since the two machines have a very similar graphics instruction. What is especially encouraging is that in the months since it first appeared Amx have managed to prevent it becoming dismissed as an expensive toy by producing an impressive range of BBC support software to make use of the hardware's abilities, and the same is planned for the Amstrad.

To set up the system you just fit a box and the joystick socket which is powered via a cable fitted to the machine's computer lead. The box has on its side a BBC-style port into which the mouse lead, presumably unswitched from the BBC version, plugs. Movement of the mouse is then translated into mouse-driven cursor control codes.

The essential software is a piece of code that installs several ROM extensions to locomotive track and these allow you to set up windows, move icons and pointers (manually and at high speed), detect cursor position on screen and read which of the three mouse buttons are pressed - in short all you need to set up a window/icon-driven program of your own. Because of the lackings of spare memory offered by the CPC compared to the BBC it is high res. software



is supplied on cassette but Amx also offer a ROM version which would allow you to use the routines with large programs or, to a degree, with commercial releases such as Amstrad.

The ROM's mean that you have a remarkably simple to use, but unusually powerful system. The potential of it is illustrated by the fact that the pattern designer, icon designer and Amx Art programs that are also supplied on the tape and which are all fast, flexible and very impressive, are written in Basic and can be modified or added to as you wish.

The two designer packages are extremely easy and uncluttered to use and really need little explanation - rather as in an IDEO designer you move over a large grid setting the squares to black or white as necessary whilst a small image of the icon changes to show you the result. Amx is a different kind of fish altogether - designed to emulate pro-

grams such as MacPaint and is very good indeed for certain free hand efforts such as pencil or spray-gun icons, texture filling etc. As a serious artist using a screen more from the lack of a magnifying glass to allow precision drawing and in not allowing you to use the entire screen to draw but some of Amx's demo pictures are truly breathtaking.

Further releases planned are utilities that let you add colours, to many thousands of different shades produced by stippling, to the drawings you have produced using Amx Art. Amx Desk which provides icon-driven calculator, diary and memo pad functions and also a Pagemaker utility for composing A4 sheets for club magazines etc.

Together they add up to one of the most impressive, and certainly the most original, Amstrad peripherals I have seen.

Tony Keadle

Picture this

Hardware *Enterprise/Fidelity TV Monitor Price £239.95 Micro Various Suppliers Enterprise Computers, 21-27 Repton Street, London N4 6NQ*

There are a number of good reasons for buying a monitor for your home ranging from the relatively frivolous, such as the brighter exposures when you stop the alarm, to the cerebral - even try reading 80-column text on a wobbly TV picture while word processing?

There is, however, one good reason for not buying one - cost. Recently though the combination colour television/monitor has set out to change all that. For little over the price of a second hand you can also have the advantages of 80-column input.

The Enterprise TV monitor is strictly not dedicated to its namesake computer but via its 21-pin RGBT type Xerox-compatible socket can emulate the displays of a variety home monitors, with

leads available for BBC, Commodore, Cms, Dragon and Amx. An interface should also provide for the Spectrum. In fact it takes very little imagination to learn that this is a badge version of the 14 inch screen Fidelity CTM 1400.

Television performance is well up to standard, even with a set-top aerial, thanks to the AFC switch, and computer signals received through this socket are well clear and bright though many may prove a little wobbly. But it can be destructive to switch from this to direct RGB input. I used an Enterprise 120 and certainly the monitor's hi res graphics and colour look on a brighter, sharper quality.

I then moved on to some word processing with no trouble at all reading the 80-column text. The tube is fully corrected for pin-cushion distortion, which is important in text modes and isn't always the case with older TVs.

Sound is also channelled through the monitor and, while I wish output should put many computers' internal speakers to shame.

A handsome piece of equipment and

despite my glibbie about the control flap it represents good value, especially as it may be discounted by up to £30 in certain places.

John Minson



Bonfire Party

Make your political statement with this program for the Spectrum 48K by Andrew Bird

This week, as Bonfire Night approaches, we give you the chance to recreate the events of that infamous November the 5th. In this game, you must move Guy Fawkes around the screen to collect the right barrels of gunpowder... however, one of the barrels has spin and you are leaving a trail of gunpowder behind you... and the end of the trail wants to have caught fire.

Program Data

Star No
1-75

Initials: NAB:BNP

350-800
3500-3580
3500-3580
4000-4080

5000-5200
5000-5000
6000-6000
6000-6000

Variables

col, col, col
Dir a, Dir y

Draw screen 1
Main loop
Guy runs into barrels
Burning trail catches up with
Guy
Screen 2 Win routine
Instructions & Draw screen 2
Graphics
Moodle: instant screen & sound

Machine code routines
Remains trail

trial
x1, x2
yy
y4
a, b
a
p
dax
i, n, o

Speed of burning trail
Parts of trail drawn & burning
Number of times gun powder
collected
Displays ggs
Position of Guy Fawkes
Instructions
Used to draw screen
Used to read data
Default joystick logic

MP Underlined capital letters in the listing
should be entered in graphics mode.





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Change your standards

Connect your Commodore 64 up to a Centronics printer with the help of a soldering iron and Eric Daghaye

Those of us who have used the MPS 801 printers and their equivalents on the Commodore 64 know about their limitations. On a logical chance to buy a better printer such as an Epson and use it instead, for there is one big problem: Commodore has not provided anything else than the serial interface to hook printers on. The problem can be solved by the purchase of a serial Centronics interface, but the price of these can be prohibitive. Another solution is to buy a cable that runs off the user port into a Centronics plug. This will work only with software which has provisions for such a setup, such as Easywriter or with the software supplied with the cable.

To most of us, including myself in a previous programming life, the tin and out of how all this works was a mixture of technical wizardry and incomprehensible software. But after many a sleepless night and gallons of coffee all this became quite simple. In order to understand

what how a parallel interface works, a bit of background theory is necessary. If you just want to get on with it and build the interface, skip the following paragraphs.

The parallel interface

A signal in number consists of a combination of eight electrical pulses, a '0' is represented by about 0 volts and a '1' by about five volts. There are two ways of communicating these pulses over cables: at a time, so to transmit one signal bit at a time, or to transmit eight pulses travelling at one time (in parallel), or all eight pulses at a time, requiring eight wires at least, one for each pulse. The former method is known as 'serial', the latter as 'parallel'. It is for you to judge why.

A Centronics interface is in fact a parallel way of transmitting data. But you need more than eight wires to communicate with a printer. First the printer must have a reference coming from the computer, which is supplied by the *Strobe* output, then the printer also wants to know what the computer uses as ground voltage level, and finally, the printer

must be able to tell the computer when it is ready to receive the next byte. The communication goes as follows: the computer checks if the printer is ready by looking at the *Ready* (acknowledge) line. If this is satisfactory, it sends the data on the eight wires. When the printer receives these, it changes the state of the *Ready* line to tell the computer not to send more data, whenever the data it has just received and when it has finished, changes the *Ready* line again to let the computer know it is ready to accept more data.

On the CPU side port, the *Strobe* and *Ground* lines are present. All we need to do now is to define which lines we are going to use for data and the reception of the *Ready* signal.

The software

I have included two programs: one in BASIC source code for those who want to do it the hard way and underpinned how it works, and a Basic program for the not so courageous ones who just want to get it going. The Basic program takes care of everything, just load it and run it while you attach the computer to, and that's it. The printer can be enabled or disabled by just typing 'Y' or 'N' and Return. It has the same effect as typing Option+A, CMD+I, but unlike the CMD+I, the 'N' command does not enable all output to the printer.

Enough for the software side of things, now we can finish with the construction of the cable and its instructions for use.

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| 1000 | 1010 | 1020 | 1030 | 1040 | 1050 | 1060 | 1070 | 1080 | 1090 | 1100 | 1110 | 1120 | 1130 | 1140 | 1150 | 1160 | 1170 | 1180 | 1190 | 1200 | 1210 | 1220 | 1230 | 1240 | 1250 | 1260 | 1270 | 1280 | 1290 | 1300 | 1310 | 1320 | 1330 | 1340 | 1350 | 1360 | 1370 | 1380 | 1390 | 1400 | 1410 | 1420 | 1430 | 1440 | 1450 | 1460 | 1470 | 1480 | 1490 | 1500 | 1510 | 1520 | 1530 | 1540 | 1550 | 1560 | 1570 | 1580 | 1590 | 1600 | 1610 | 1620 | 1630 | 1640 | 1650 | 1660 | 1670 | 1680 | 1690 | 1700 | 1710 | 1720 | 1730 | 1740 | 1750 | 1760 | 1770 | 1780 | 1790 | 1800 | 1810 | 1820 | 1830 | 1840 | 1850 | 1860 | 1870 | 1880 | 1890 | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | 2000 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | 2090 | 2100 | 2110 | 2120 | 2130 | 2140 | 2150 | 2160 | 2170 | 2180 | 2190 | 2200 | 2210 | 2220 | 2230 | 2240 | 2250 | 2260 | 2270 | 2280 | 2290 | 2300 | 2310 | 2320 | 2330 | 2340 | 2350 | 2360 | 2370 | 2380 | 2390 | 2400 | 2410 | 2420 | 2430 | 2440 | 2450 | 2460 | 2470 | 2480 | 2490 | 2500 | 2510 | 2520 | 2530 | 2540 | 2550 | 2560 | 2570 | 2580 | 2590 | 2600 | 2610 | 2620 | 2630 | 2640 | 2650 | 2660 | 2670 | 2680 | 2690 | 2700 | 2710 | 2720 | 2730 | 2740 | 2750 | 2760 | 2770 | 2780 | 2790 | 2800 | 2810 | 2820 | 2830 | 2840 | 2850 | 2860 | 2870 | 2880 | 2890 | 2900 | 2910 | 2920 | 2930 | 2940 | 2950 | 2960 | 2970 | 2980 | 2990 | 3000 | 3010 | 3020 | 3030 | 3040 | 3050 | 3060 | 3070 | 3080 | 3090 | 3100 | 3110 | 3120 | 3130 | 3140 | 3150 | 3160 | 3170 | 3180 | 3190 | 3200 | 3210 | 3220 | 3230 | 3240 | 3250 | 3260 | 3270 | 3280 | 3290 | 3300 | 3310 | 3320 | 3330 | 3340 | 3350 | 3360 | 3370 | 3380 | 3390 | 3400 | 3410 | 3420 | 3430 | 3440 | 3450 | 3460 | 3470 | 3480 | 3490 | 3500 | 3510 | 3520 | 3530 | 3540 | 3550 | 3560 | 3570 | 3580 | 3590 | 3600 | 3610 | 3620 | 3630 | 3640 | 3650 | 3660 | 3670 | 3680 | 3690 | 3700 | 3710 | 3720 | 3730 | 3740 | 3750 | 3760 | 3770 | 3780 | 3790 | 3800 | 3810 | 3820 | 3830 | 3840 | 3850 | 3860 | 3870 | 3880 | 3890 | 3900 | 3910 | 3920 | 3930 | 3940 | 3950 | 3960 | 3970 | 3980 | 3990 | 4000 | 4010 | 4020 | 4030 | 4040 | 4050 | 4060 | 4070 | 4080 | 4090 | 4100 | 4110 | 4120 | 4130 | 4140 | 4150 | 4160 | 4170 | 4180 | 4190 | 4200 | 4210 | 4220 | 4230 | 4240 | 4250 | 4260 | 4270 | 4280 | 4290 | 4300 | 4310 | 4320 | 4330 | 4340 | 4350 | 4360 | 4370 | 4380 | 4390 | 4400 | 4410 | 4420 | 4430 | 4440 | 4450 | 4460 | 4470 | 4480 | 4490 | 4500 | 4510 | 4520 | 4530 | 4540 | 4550 | 4560 | 4570 | 4580 | 4590 | 4600 | 4610 | 4620 | 4630 | 4640 | 4650 | 4660 | 4670 | 4680 | 4690 | 4700 | 4710 | 4720 | 4730 | 4740 | 4750 | 4760 | 4770 | 4780 | 4790 | 4800 | 4810 | 4820 | 4830 | 4840 | 4850 | 4860 | 4870 | 4880 | 4890 | 4900 | 4910 | 4920 | 4930 | 4940 | 4950 | 4960 | 4970 | 4980 | 4990 | 5000 | 5010 | 5020 | 5030 | 5040 | 5050 | 5060 | 5070 | 5080 | 5090 | 5100 | 5110 | 5120 | 5130 | 5140 | 5150 | 5160 | 5170 | 5180 | 5190 | 5200 | 5210 | 5220 | 5230 | 5240 | 5250 | 5260 | 5270 | 5280 | 5290 | 5300 | 5310 | 5320 | 5330 | 5340 | 5350 | 5360 | 5370 | 5380 | 5390 | 5400 | 5410 | 5420 | 5430 | 5440 | 5450 | 5460 | 5470 | 5480 | 5490 | 5500 | 5510 | 5520 | 5530 | 5540 | 5550 | 5560 | 5570 | 5580 | 5590 | 5600 | 5610 | 5620 | 5630 | 5640 | 5650 | 5660 | 5670 | 5680 | 5690 | 5700 | 5710 | 5720 | 5730 | 5740 | 5750 | 5760 | 5770 | 5780 | 5790 | 5800 | 5810 | 5820 | 5830 | 5840 | 5850 | 5860 | 5870 | 5880 | 5890 | 5900 | 5910 | 5920 | 5930 | 5940 | 5950 | 5960 | 5970 | 5980 | 5990 | 6000 | 6010 | 6020 | 6030 | 6040 | 6050 | 6060 | 6070 | 6080 | 6090 | 6100 | 6110 | 6120 | 6130 | 6140 | 6150 | 6160 | 6170 | 6180 | 6190 | 6200 | 6210 | 6220 | 6230 | 6240 | 6250 | 6260 | 6270 | 6280 | 6290 | 6300 | 6310 | 6320 | 6330 | 6340 | 6350 | 6360 | 6370 | 6380 | 6390 | 6400 | 6410 | 6420 | 6430 | 6440 | 6450 | 6460 | 6470 | 6480 | 6490 | 6500 | 6510 | 6520 | 6530 | 6540 | 6550 | 6560 | 6570 | 6580 | 6590 | 6600 | 6610 | 6620 | 6630 | 6640 | 6650 | 6660 | 6670 | 6680 | 6690 | 6700 | 6710 | 6720 | 6730 | 6740 | 6750 | 6760 | 6770 | 6780 | 6790 | 6800 | 6810 | 6820 | 6830 | 6840 | 6850 | 6860 | 6870 | 6880 | 6890 | 6900 | 6910 | 6920 | 6930 | 6940 | 6950 | 6960 | 6970 | 6980 | 6990 | 7000 | 7010 | 7020 | 7030 | 7040 | 7050 | 7060 | 7070 | 7080 | 7090 | 7100 | 7110 | 7120 | 7130 | 7140 | 7150 | 7160 | 7170 | 7180 | 7190 | 7200 | 7210 | 7220 | 7230 | 7240 | 7250 | 7260 | 7270 | 7280 | 7290 | 7300 | 7310 | 7320 | 7330 | 7340 | 7350 | 7360 | 7370 | 7380 | 7390 | 7400 | 7410 | 7420 | 7430 | 7440 | 7450 | 7460 | 7470 | 7480 | 7490 | 7500 | 7510 | 7520 | 7530 | 7540 | 7550 | 7560 | 7570 | 7580 | 7590 | 7600 | 7610 | 7620 | 7630 | 7640 | 7650 | 7660 | 7670 | 7680 | 7690 | 7700 | 7710 | 7720 | 7730 | 7740 | 7750 | 7760 | 7770 | 7780 | 7790 | 7800 | 7810 | 7820 | 7830 | 7840 | 7850 | 7860 | 7870 | 7880 | 7890 | 7900 | 7910 | 7920 | 7930 | 7940 | 7950 | 7960 | 7970 | 7980 | 7990 | 8000 | 8010 | 8020 | 8030 | 8040 | 8050 | 8060 | 8070 | 8080 | 8090 | 8100 | 8110 | 8120 | 8130 | 8140 | 8150 | 8160 | 8170 | 8180 | 8190 | 8200 | 8210 | 8220 | 8230 | 8240 | 8250 | 8260 | 8270 | 8280 | 8290 | 8300 | 8310 | 8320 | 8330 | 8340 | 8350 | 8360 | 8370 | 8380 | 8390 | 8400 | 8410 | 8420 | 8430 | 8440 | 8450 | 8460 | 8470 | 8480 | 8490 | 8500 | 8510 | 8520 | 8530 | 8540 | 8550 | 8560 | 8570 | 8580 | 8590 | 8600 | 8610 | 8620 | 8630 | 8640 | 8650 | 8660 | 8670 | 8680 | 8690 | 8700 | 8710 | 8720 | 8730 | 8740 | 8750 | 8760 | 8770 | 8780 | 8790 | 8800 | 8810 | 8820 | 8830 | 8840 | 8850 | 8860 | 8870 | 8880 | 8890 | 8900 | 8910 | 8920 | 8930 | 8940 | 8950 | 8960 | 8970 | 8980 | 8990 | 9000 | 9010 | 9020 | 9030 | 9040 | 9050 | 9060 | 9070 | 9080 | 9090 | 9100 | 9110 | 9120 | 9130 | 9140 | 9150 | 9160 | 9170 | 9180 | 9190 | 9200 | 9210 | 9220 | 9230 | 9240 | 9250 | 9260 | 9270 | 9280 | 9290 | 9300 | 9310 | 9320 | 9330 | 9340 | 9350 | 9360 | 9370 | 9380 | 9390 | 9400 | 9410 | 9420 | 9430 | 9440 | 9450 | 9460 | 9470 | 9480 | 9490 | 9500 | 9510 | 9520 | 9530 | 9540 | 9550 | 9560 | 9570 | 9580 | 9590 | 9600 | 9610 | 9620 | 9630 | 9640 | 9650 | 9660 | 9670 | 9680 | 9690 | 9700 | 9710 | 9720 | 9730 | 9740 | 9750 | 9760 | 9770 | 9780 | 9790 | 9800 | 9810 | 9820 | 9830 | 9840 | 9850 | 9860 | 9870 | 9880 | 9890 | 9900 | 9910 | 9920 | 9930 | 9940 | 9950 | 9960 | 9970 | 9980 | 9990 | 10000 | 10010 | 10020 | 10030 | 10040 | 10050 | 10060 | 10070 | 10080 | 10090 | 10100 | 10110 | 10120 | 10130 | 10140 | 10150 | 10160 | 10170 | 10180 | 10190 | 10200 | 10210 | 10220 | 10230 | 10240 | 10250 | 10260 | 10270 | 10280 | 10290 | 10300 | 10310 | 10320 | 10330 | 10340 | 10350 | 10360 | 10370 | 10380 | 10390 | 10400 | 10410 | 10420 | 10430 | 10440 | 10450 | 10460 | 10470 | 10480 | 10490 | 10500 | 10510 | 10520 | 10530 | 10540 | 10550 | 10560 | 10570 | 10580 | 10590 | 10600 | 10610 | 10620 | 10630 | 10640 | 10650 | 10660 | 10670 | 10680 | 10690 | 10700 | 10710 | 10720 | 10730 | 10740 | 10750 | 10760 | 10770 | 10780 | 10790 | 10800 | 10810 | 10820 | 10830 | 10840 | 10850 | 10860 | 10870 | 10880 | 10890 | 10900 | 10910 | 10920 | 10930 | 10940 | 10950 | 10960 | 10970 | 10980 | 10990 | 11000 | 11010 | 11020 | 11030 | 11040 | 11050 | 11060 | 11070 | 11080 | 11090 | 11100 | 11110 | 11120 | 11130 | 11140 | 11150 | 11160 | 11170 | 11180 | 11190 | 11200 | 11210 | 11220 | 11230 | 11240 | 11250 | 11260 | 11270 | 11280 | 11290 | 11300 | 11310 | 11320 | 11330 | 11340 | 11350 | 11360 | 11370 | 11380 | 11390 | 11400 | 11410 | 11420 | 11430 | 11440 | 11450 | 11460 | 11470 | 11480 | 11490 | 11500 | 11510 | 11520 | 11530 | 11540 | 11550 | 11560 | 11570 | 11580 | 11590 | 11600 | 11610 | 11620 | 11630 | 11640 | 11650 | 11660 | 11670 | 11680 | 11690 | 11700 | 11710 | 11720 | 11730 | 11740 | 11750 | 11760 | 11770 | 11780 | 11790 | 11800 | 11810 | 11820 | 11830 | 11840 | 11850 | 11860 | 11870 | 11880 | 11890 | 11900 | 11910 | 11920 | 11930 | 11940 | 11950 | 11960 | 11970 | 11980 | 11990 | 12000 | 12010 | 12020 | 12030 | 12040 | 12050 | 12060 | 12070 | 12080 | 12090 | 12100 | 12110 | 12120 | 12130 | 12140 | 12150 | 12160 | 12170 | 12180 | 12190 | 12200 | 12210 | 12220 | 12230 | 12240 | 12250 | 12260 | 12270 | 12280 | 12290 | 12300 | 12310 | 12320 | 12330 | 12340 | 12350 | 12360 | 12370 | 12380 | 12390 | 12400 | 12410 | 12420 | 12430 | 12440 | 12450 | 12460 | 12470 | 12480 | 12490 | 12500 | 12510 | 12520 | 12530 | 12540 | 12550 | 12560 | 12570 | 12580 | 12590 | 12600 | 12610 | 12620 | 12630 | 12640 | 12650 | 12660 | 12670 | 12680 | 12690 | 12700 | 12710 | 12720 | 12730 | 12740 | 12750 | 12760 | 12770 | 12780 | 12790 | 12800 | 12810 | 12820 | 12830 | 12840 | 12850 | 12860 | 12870 | 12880 | 12890 | 12900 | 12910 | 12920 | 12930 | 12 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-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Analytical Amstrad

A testing time in store for Chemistry students on the 484 - written by Roger Walton

Many universities stipulate for Chemistry at aged 16+ require students to be able to identify simple salts when given the results of tests on them. This requires quite a lot of practice if the student is to be confident in interpreting the results of such tests.

The aim of this program is to allow you to do this on an Amstrad CPC 484 com-

puter. The program is an adaptation of similar programs seen at other machines but it takes advantage of the Amstrad's window commands to produce a clear and attractive screen display.

The user is asked to choose which one of 40 salts to try to identify. He is then given a short description of the salt and invited to choose a test. The tests used

are fairly standard except that the Davy's's Alloy test for nitrate ion has been chosen in preference to the older "brown-ring" test.

The student may choose to guess the identity of the salt at any time. Alternatively, if the student types *Stop* the identity of the salt is revealed and the student may choose another chemical. Help with the interpretation of the tests is given by typing *Help*.

If you find the prospect of typing in this boring, I can supply a copy upon receipt of a blank cassette and £2.50. My address is: Tilmare Close, Haddington Lane, York YO2 4HG.

```

1000  REM *****  ANALYTICAL  *****
1010  REM *****  CHEMISTRY  *****
1020  REM *****  16+  *****
1030  REM *****  16+  *****
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1070  REM *****  16+  *****
1080  REM *****  16+  *****
1090  REM *****  16+  *****
1100  REM *****  16+  *****
1110  REM *****  16+  *****
1120  REM *****  16+  *****
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1950  REM *****  16+  *****
1960  REM *****  16+  *****
1970  REM *****  16+  *****
1980  REM *****  16+  *****
1990  REM *****  16+  *****
2000  REM *****  16+  *****

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2010  REM *****  16+  *****
2020  REM *****  16+  *****
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2110  REM *****  16+  *****
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2130  REM *****  16+  *****
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2170  REM *****  16+  *****
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2190  REM *****  16+  *****
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2240  REM *****  16+  *****
2250  REM *****  16+  *****
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2280  REM *****  16+  *****
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2960  REM *****  16+  *****
2970  REM *****  16+  *****
2980  REM *****  16+  *****
2990  REM *****  16+  *****
3000  REM *****  16+  *****

```

Peek & Poke



Lost Adventure

It is difficult not to identify, through
analysis, problems

Q I own a Commodore 64 and since buying the deluxe version of *The Quik* I have been hiding away in my little room writing adventure after adventure. However, in my latest epic, like a fool, I mixed the game into the *Save-Adventure* part of the scene and not the *Save-Adventure*. I have tried and tried to convince it but to no avail.

have contacted Olinco, but no one there could help me. I would be very grateful if you could help me with this problem. The version of File Commander that I have is 2.04.

A final note: I often find myself recommending you keep an old copy of your Omni database, you have invested not all your work. The latest database option saves the interpretive code together with the database database, which means that you cannot use the latest options of The Omni to reconstruct your data.

There's more, no real method of retrieving the situation either, and then nothing appears. I know that you won't want me to say this but why did you not name the database after you saved the adventure? Anyway, whenever the reasoning was I am afraid that the old database piece of advice is going to be issued out once again. . . if you are developing a piece of software, using a generator or not, always do it in a different manner. Or don't.

Crossed

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Q My setup consists of a 486 Spectrum and a monitor based in UK. I need a keyboard plus an interface. I also have a printer connected via a parallel port adapter as well as an Alphanumeric II plotter. Frustratingly, none of them work when running Background, even so I've tried to connect all the other devices to the computer. In this situation, what can I do? Is it still OK? However, if the device are connected the programs keep crashing - the printer does not respond and the plotter is plugged in. I always type Background before making any changes.

A This seems to be a purely supply problem. I can't quite understand why you get the wet few games, but I suggest that you get your machine checked. You can test if things are ok before loading by playing a test address in

them far close to 40% as possible), with a value and then Asking is **■** ensure that it has not changed. If the value has changed then you have a Ram problem. If no change has taken place then I suspect the Ram.

Most common

Area Index of Seedling

Q Where is which I could find a more varied way of giving money should be this year

A The last time I was infected was for a new way I got caught-up between. All I am going to say this time is that this is just a question.

```

%clear all
%format s 17.0e
%let n = 200000;
%let k = 4;
%let h = 1;
%let h2 = 2;
%let h3 = 3;
%let h4 = 4;
%let h5 = 5;
%let h6 = 6;
%let h7 = 7;
%let h8 = 8;
%let h9 = 9;
%let h10 = 10;
%let h11 = 11;
%let h12 = 12;
%let h13 = 13;
%let h14 = 14;
%let h15 = 15;
%let h16 = 16;
%let h17 = 17;
%let h18 = 18;
%let h19 = 19;
%let h20 = 20;
%let h21 = 21;
%let h22 = 22;
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%let h110 = 110;
%let h111 = 111;
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GOOD

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| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

[illegible]

| Variable | Mean | SD |
|--|--------------------|--------------------|
| Age (years) | 34.5 | 10.2 |
| Gender (male/female) | 18/12 | - |
| Education (years) | 12.5 | 1.5 |
| Income (€) | 1500 | 500 |
| Marital status (married/single) | 10/10 | - |
| Occupation (unemployed/employed) | 10/10 | - |
| Health status (good/bad) | 10/10 | - |
| Smoking status (smoker/non-smoker) | 5/15 | - |
| Alcohol consumption (yes/no) | 5/15 | - |
| Exercise frequency (times/week) | 2.5 | 1.5 |
| Stress level (low/high) | 5/10 | - |
| Family size (number of children) | 1.5 | 1.0 |
| Home ownership (owner/renter) | 10/10 | - |
| Religious affiliation (Catholic/Protestant) | 10/10 | - |
| Political affiliation (Left/Right) | 10/10 | - |
| Travel frequency (times/month) | 2.0 | 1.0 |
| Health insurance (yes/no) | 10/10 | - |
| Language spoken at home (German/Other) | 10/10 | - |
| Time spent in Germany (years) | 10.0 | 5.0 |
| Reason for migration (work/family) | 10/10 | - |
| Current residence (city/country) | 10/10 | - |
| Previous residence (city/country) | 10/10 | - |
| Duration of stay in current residence (years) | 5.0 | 3.0 |
| Duration of stay in previous residence (years) | 5.0 | 3.0 |
| Duration of stay in Germany (years) | 10.0 | 5.0 |
| Duration of stay in home country (years) | 10.0 | 5.0 |
| Duration of stay in other countries (years) | 0.0 | 0.0 |
| Duration of stay in Germany (months) | 120.0 | 60.0 |
| Duration of stay in home country (months) | 120.0 | 60.0 |
| Duration of stay in other countries (months) | 0.0 | 0.0 |
| Duration of stay in Germany (days) | 3600.0 | 1800.0 |
| Duration of stay in home country (days) | 3600.0 | 1800.0 |
| Duration of stay in other countries (days) | 0.0 | 0.0 |
| Duration of stay in Germany (hours) | 86400.0 | 43200.0 |
| Duration of stay in home country (hours) | 86400.0 | 43200.0 |
| Duration of stay in other countries (hours) | 0.0 | 0.0 |
| Duration of stay in Germany (minutes) | 518400.0 | 259200.0 |
| Duration of stay in home country (minutes) | 518400.0 | 259200.0 |
| Duration of stay in other countries (minutes) | 0.0 | 0.0 |
| Duration of stay in Germany (seconds) | 3110400.0 | 1555200.0 |
| Duration of stay in home country (seconds) | 3110400.0 | 1555200.0 |
| Duration of stay in other countries (seconds) | 0.0 | 0.0 |
| Duration of stay in Germany (milliseconds) | 3110400000.0 | 1555200000.0 |
| Duration of stay in home country (milliseconds) | 3110400000.0 | 1555200000.0 |
| Duration of stay in other countries (milliseconds) | 0.0 | 0.0 |
| Duration of stay in Germany (microseconds) | 3110400000000.0 | 1555200000000.0 |
| Duration of stay in home country (microseconds) | 3110400000000.0 | 1555200000000.0 |
| Duration of stay in other countries (microseconds) | 0.0 | 0.0 |
| Duration of stay in Germany (nanoseconds) | 3110400000000000.0 | 1555200000000000.0 |
| Duration of stay in home country (nanoseconds) | 3110400000000000.0 | 1555200000000000.0 |
| Duration of stay in other countries (nanoseconds) | 0.0 | 0.0 |

[illegible]

1000

| Account | Debit | Credit |
|-----------------|-------|--------|
| Balance forward | | 100.00 |
| Advertising | 10.00 | |
| Depreciation | 5.00 | |
| Interest | 2.00 | |
| Insurance | 1.00 | |
| Office supplies | 3.00 | |
| Salaries | 20.00 | |
| Taxes | 1.00 | |
| Utilities | 2.00 | |
| Profit | | 56.00 |
| Total | 45.00 | 156.00 |

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[illegible]

1. The first step is to identify the problem. This involves understanding the symptoms and the context in which they are occurring.

C & F ASSOCIATES

[illegible]

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5.1. FURTHER READING

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图 12-10 为图 12-9 所示电路的瞬态仿真结果。图中, 红色曲线为电容电压, 蓝色曲线为电感电压, 绿色曲线为电阻电压。从图中可以看出, 在开关闭合的瞬间, 电容电压和电感电压均发生突变, 而电阻电压则保持恒定。

Arcade Avenue



C6.4 bonanza

This week is dedicated to the Commissioners 44—often a tedious drudge of Police we have recently been very fortunate to receive a marvelous selection of material, mostly as a result of the excellent work of our regular correspondents Kenneth Dunbar in Liverpool. He has sent us so much good stuff that I can't squeeze it all into one column but for those that can't wait to see more books and for our Arsene Arsene Handbooks where you will find Commissioners Polignore and much more besides. This week I have also included the promised Police from Stephen and David Chandler which appear after some time recently.

[illegible]

Chinese routines

His first new routine is for *Chris Minor* - yes I know we've done this before but just to illustrate the sort of problems that crop up it seems that the version on the *Rediff* cassette has a new music leader that makes it hard to get into. Enter the new one.

[illegible]

Type **Run**. If **Data Error** appears, then check listing. Type **Now**. Then enter the line.

[illegible]

Type: Sys 20000. How: print
 Shift Windows to load the load-
 at program

Once all the programs has loaded an error message will appear on the screen but you ignore this. Now enter the following **Pokes** without clearing or scrolling the screen. This is because the machine code is stored in the first ten lines: **Poke 1003,0**
Poke 1005,8 **Poke 1006,126**
Run 1000,1

A. K. Sengupta et al.

The machine will appear to hang but do not worry. Poke 34492.0 to stop collision detection. Poke 34621.173 infinite loop. Poke 34516.100. Poke 34517.5. Poke 34519.004 - no need to collect objects. See 34519.004 for more info.

[illegible]

Professor Patrick J. Brown, who
also is a neurosurgeon,

[illegible]

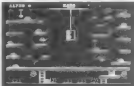
Type Size : 8 Data Error appears Data check failed.
Type Size : None under this ID
Index : 00000000 : Index

1. **NAME** : _____
 2. **DATE** : _____
 3. **TOPIC** : _____

Now press **Shift+F10** to load the game loader. Once the program has loaded press **Alt+F4** twice. Finally **Push 32768145** to make him. **Push 32617,0** to make his eyes. **For 32770** do **next**.

[illegible]

Pyramaxams: Load = 1.0
 Poise 2218.200; Poise 2219.80
 Poise 2248.100; Poise 2249.10
 Poise 2250.141; Poise 2251.13
 Poise 2252.083; Poise 2253.78
 Poise 2254.247; Poise 2255.8
 Run: Error: Poise 2262.17



Peasby Lake: 53 Gold strikes last (over). Poole 1780,36 instances lake stream. Apr 1922.

Granville Lake: 809,213 (over). Poole 2028,249. Poole 2028,2. Poole 2010,234 - no collision. Spewswell. Poole 2029,162. Poole 2129,169. Poole 2129,7. Poole 2129,234. Poole 2129,169. Poole 2129,0. Poole 2129,234 - instance 2029.

[Unsubscribe](#)

Jungle Story: Fake 52450,166
 Indica trees. Substance : Fake
 52460,166 : Fake 52461,8 :
 Fake 52462,104 trees. Chiller.
 Load in normal and games
Ray/Dog Feature Fake
 52467,172 for indica strategy
 and the 52468

Center for Policy Studies, 173
 11th St., New York, New York

Local army on arrival and
 found the machine. Police
 50079, 104 Sps 5354 (Euler Street)
 Police 5004, 1178 Police
 50079, 173 Police 18060, 8
 Police 18041, 254 Hirschbach
 Police 52262, 113 Bunch Police
 52262, 148 Police 52262, 8
 Police 52264, 234 no collection
 Sps 52264, Mr Wemyss Police
 51004, 173 Police 52261, 204
 no coll Police 18226, 104
 Police 18228, 8 Police 18230, 224
 no collection on first pass. Police
 20233, 104 Police 18234, 2
 Police 18235, 224 no collection
 in second pass

Ready Set: Strikes Back
Type: Lead and when ready appears type: **Poster 1012.785**
Poster 1012.288; **Poster 1012.285**
and then type **Run When**
Reading: Readable again type:
Poster 2012.11.80; **Poster 2012.0.0**
; **Poster 2012.143**; **Poster**
2012.11.19; **Poster 2012.0.0** then
type **See 14307** and you are
unavailable. On level 1 after
opening online post type 0 and
is not TT to be level 8, after

getting former post type 1 and
posts P2 to go to level 4. Col.
level 4 after getting the post-
back type 1 and his P2 to go to
level 14.

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Tony Bridge's Adventure Corner



Mind your manors

There can be only about three adventures which have not based on *The Quill*, and those are living half a mile from the source of the Amazon. I believe that this ability, the ability to use or think page of adventure writing is one of the most important programs for any home computer user to be released in the last few years.

In America, several other graphic adventures writers have been released, although as far as I have seen, these are attractive but fairly useless for serious players.

The problem with early versions of *The Quill*, and one which most reviewers have asked upon with glee, is the fact that most *Quill* adventures tend to lack the same - once you've seen the typical *Quill* response (You have with you nothing at all and OK bye here a new day) then there are no more surprises.

Since its release some two or three years ago *Quill* has produced a number of up-dates for the program, the first of which was *Level C*. This is the version that new purchasers of the program will receive, but is also available as an up-date for just \$2.95 to anyone who still has the original tape. Version C goes some way toward allowing the author to customize the responses within the adventure.

Static Illustrations

The second advance was *The Illustrover*, as the graphics-creating part of *The Quill*'s suite of programs. This ability acts as much as the main program, but transforms the basic database. A sophisticated graphics editor allows the writer to create static illustrations to accompany *Quill* locations or create title screens. Even so, there is still some inflexibility here; the picture can be quite slow to draw, and once complete, the player must then press a key in order to get on to the next part of the game (and quite often, isn't it as on his quest).

New illustrations of both *The Quill* and *The Illustrover* have been largely answered by the latest release from *Quill* called *The Patch*. This allows the programmer to use a split screen, displaying the scene of graphics to view (the picture will scroll up as you input text),

and also offers several ready-made sound effects as well as one or two character sets. Other facilities include save-to-buffer and editing of some of the system messages.

As it is only the alternative responses that use up the memory, you can add that this is going to be a necessary adjunct to *The Quill* if it costs you \$2.95, and, worse, of course, with the main *Quill* and *Illustrator* programs.

With prices for the main programs running at £11 each (£12 for the Commodore and Amstrad disc versions), the whole suite is not cheap, but with them the imaginative author can produce a sophisticated adventure that will stand up to any others on the market.

There's an exciting new adventure development program from the Ram Jam Corporation, but it is only available to software houses and those writers with a good idea, which allows for graphics, sound and moving characters.

For Amstrad owners, *Locomote* has just this week released the *Graphic Adventure Creator* which would appear at first to be an excellent ability. More of it soon.

So that's the package - how has it been used recently? That's the question that I shall be concentrating on in the next couple of weeks, and I'll hear a groan, then all I can say is: *Word on*, because there are some amazing programs about!

A sample of new adventures to be released by *Quill* are *The Hollow*, again from Tom Davies, an excellent writer, and *Madcap Manor* written by Steve Middlemore. Paul Sykes and Brian Johnston. An innovation here is the fact that both graphics and text versions are offered, one on each side of the cassette.

The two versions of *Madcap Manor* are similar in most respects, except for small detail changes - for example, the found objects are rather different, and some of the more complex problems are missing in the graphic version, due no doubt to the extra memory required to service the excellent graphics, drawn by Steve Green.

Finding sleepers one day, you discover that you are extraordinarily transformed into Inspector Le Glue, the famous Belgian detective. Starting off, you find that, coming straight from your bed, you must find some clothes, and then you can explore the Manor. Said Mrs Cranston the post relaxing with her cherry brick! Play Once

Take on the Manor Manor's grand piano! See *Manor* the trailer's made sense!

Madcap Manor is the home of great locations, and this is made even worse by the characters wandering about, with whom you can hold conversations and just think as to what is going on - the closest yet to character interpretation is a *Quill* adventure. The logic, however, sometimes goes awry (I was able to start the engine of the car in the garage before finding the starting handle).

The *Hollow*, on the other hand, appears to be a completely different game on each side of the cassette, so must also rate as good value. The player is required to find the remaining seven pieces of magical meditation while travelling in the mystical land of Maylas (you start with three pieces). Tom Davies, an adventure writer these programs, I have admired for years, has drawn up a scenario which uses very long and atmospheric descriptions throughout - I didn't find the adventure itself particularly atmospheric, but the way he because I haven't yet progressed very far, being held up by the necessity of finding a spot to get past a very strange bird.

The graphics within *Manor* seem very colourful and very flat graphics, by Tom himself, and good points include the fact that you can ask for help and for more questions a detailed clue in the particular problem worrying you at that location. Finally, the player is offered an easy way to progress, or a hint at the correct



Madcap Manor

solution which may be rather harder to figure out. The program makes full use of the graphics, and the player can ask for a description in text only, or with the graphics, and pictures can be drawn only at the first visit to a location, or at every visit. There are some bad points - surely the program should say 'I don't understand when it should say 'Only one is it or are you?' That's being clever.

However, there are a couple of new good-value adventures from the house of *The Quill*, and they should give even experienced players a few weeks' hard thinking.

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Table 1

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Figure 1

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ADVENTURE HIGHLIGHT

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| 1-8) William Chest's Test Counter | 14.00 | 14.00 |
| 1-9) Number | 13.00 | 13.00 |
| 1-10) Board of the Game (Multilevel) | 12.00 | 12.00 |

Top Twenty

| | | | |
|----|------|--|-----------------|
| 1 | (1) | Way of the Exploding Fox (Spectrum/C&A/Amstrad) | Melbourne House |
| 2 | (1-) | Impossible Mission (Spectrum/C&A) | Epps/US Gold |
| 3 | (2) | Frank Bruno's Boxing (Spectrum/C&A/Amstrad) | Elite |
| 4 | (2B) | Madcat (Spectrum/C&A/Amstrad) Amstrad | Activision |
| 5 | (3-) | Indiana Jones (Spectrum/C&A/Amstrad) | Mastertonic |
| 6 | (3-) | Who Dares Wins II (C&A) | Elite |
| 7 | (3B) | Formula One Simulator (Spectrum/C&A/C&A) | Mastertonic |
| 8 | (4) | Gale Thompson's Superior (Spectrum) | Ocean |
| 9 | (4) | Fighting Warrior (Spectrum/C&A) | Melbourne House |
| 10 | (4) | Shadow Of The Dragon (Spectrum) | Milne-Gem |
| 11 | (5) | Flashlight (Spectrum) | The Edge |
| 12 | (13) | Summer Games II (C&A) | Epps/US Gold |
| 13 | (14) | Action Mixer (Spectrum/C&A) | Mastertonic |
| 14 | (13) | BMX Racers (Spectrum/C&A/C&A) | Mastertonic |
| 15 | (14) | Graham Good's Test Cricket (Spectrum/C&A) | Audiogenic |
| 16 | (1-) | Spy vs Spy II (C&A) | Beyond |
| 17 | (1-) | World Series Baseball (Spectrum/C&A) | Imagine |
| 18 | (1-) | Beach-Head (Spectrum/C&A/Amstrad/SG Amstrad/C&A/Amstrad/US Gold) | US Gold |
| 19 | (11) | Boiled On The Range (Spectrum/C&A/Amstrad) | Ultravox |
| 20 | (5) | More Games (Spectrum/C&A) | Vision |

Figures 1 and 2 show the results of the regression analysis. The regression equation for the dependent variable *Perceived Stress* is:

Readers' Chart No 48

| | | | |
|----|------|--|-----------------|
| 1 | (1) | Way of the Exploding Fist (Spectrum) (CM) (Assault) (Middleweight) (Brawl) | |
| 2 | (2) | Full Light (Spectrum) | The Edge |
| 3 | (3) | New Control (Spectrum) (CM) | Virgil |
| 4 | (4) | Heavy Thompson's Super Heat (Spectrum) | Seamus |
| 5 | (5) | Summer's Chance II (CM) | Apple/33 Gold |
| 6 | (6) | Heavy Targets (Spectrum) (CM) | Imagines |
| 7 | (7) | Bad Mischief (Spectrum) (CM) (MHC) (Electro) (Assault) | Larry II |
| 8 | (8) | Soft Act (Spectrum) (CM) | Various Artists |
| 9 | (9) | Black Swan's Rising (Spectrum) (CM) (Assault) | Ellie |
| 10 | (10) | Summer's Chance | Apple/33 Gold |

Wasting phase 40-45. "Different shopping days all over, too", says 32 Hammers of Palmers Green, London, who reports 50. Meanwhile mentions in 1. "Hurry at Sainsbury's, busy with 'this' and 'that' expeditions into the 'at Sainsbury's' and Peter Leinster of Kent, Canada with 'some' and 'at Sainsbury's' with 40-45."

Now voting on week 50 – £25 to win

Each week, *Popular* is compiling its own special software top ten chart – compiled from *Wired*!

And each week we will send \$25 to the person, who sends in, with their short story, the most original/wild, mad or clever - but never inappropriate or offensive madcap from the letters (you don't have to use them all) in the letter where the top three programs in this week's Readers' Choice finished above.

You can still vote in the chart without making up a slogan - but you won't be in with a chance of winning the prize.

All you have to do is fill in the form below (or copy it out if you don't want to damage your magazine) and send it off to: Top 10, Popular Computing Weekly, 10-11 Little Newport Street, London WC2E 8RF.

Voting for Week 31 closes at 4pm on Wednesday November 4th 2003. Entries received for that time will not be eligible for inclusion in that week's voting. The judges' decisions will final. Only one entry per individual per week will be allowed.

Benjamin Liner, *Washington*

ACL Spectator/Club CH (Kingsley): *Essential Approach*
CH (Morgan): *On Goals, Nuts & The Box/Club Spec-*
tor (Kingsley): *The Box and The Goal/Spec-*
tor (Morgan): *Goal For The Box/Club Spectator*
(Morgan): *So! It's A Kick/Goal (Morgan):*
Goal (Kingsley): *Goal (Morgan):*

New Releases

MYTHIC BEAST

Shadow of the Unicorn, not a mythical program at all, has turned up. This is the first program to use MicroGen's new *Micro Plus* interface which gives you a tape run utility, a joystick port and an extra I/O. This ought to give



you bigger games with more, and more detailed graphics.

Little wonder then that *Shadow of the Unicorn* is a large adventure with lots of graphics. It seems to be a hybrid of dozens of other games: the characters have a similar style to *Wally* games; you control main players like *Melbourne*; many of the backgrounds look like *Valhalla* and you can look in various directions as in *The Sir Sir Map*. You get a book telling the story of battles and goodies which reads like the usual fodder of pseudo-myth and crystal balls.

First impressions of the game were pretty disappointing, the graphics are nowhere near *Gargoyles* stan-

dard, and the backgrounds are pretty basic looking in places. The animation is also looking beyond what you might see in the average budget game. Though the adventure is clearly big it isn't as example any bigger than *Melbourne* - a lot smaller, in fact.

If the extra memory is being used anywhere it must be in the logic and gameplay. I found some evidence for this in the small amount of time I could spend on the game. There are lots of interesting locations and odd characters (most of whom I have slaughtered so far) as I think it may, in the end, prove to be a fairly complex complex game. An immediate *Goah Woe* is not, though.

Program *Shadow of the Unicorn*
Price £14.95
Micro Spectrum
Supplier MicroGen
Unit 75
Newport Centre,
Bristol

EASY PLAY

Camel Software has recently issued a music program for the Amstrad called *Toolbox 2*. It differs from other music programs in its intention - not to teach you much about music but simply to get you in the position of playing music quickly and easily.

It gives you the chance to play your Amstrad in a similar way to those *Game 'em up* machines where after recording the sequence of notes you require, you then use them by pressing a sin-



gle key in step with a rhythm unit. Each press of the key 'volunteers' a note of the tune. The facility is available on all three sound channels of the



'volunteers' a note of the tune. The facility is available on all three sound channels of the

DISC DRIVE

Programmer Ian Rich has done a great job, considering the limitations of the Spectrum. The 3-D perspective is good, and although the graphic display doesn't look impressive, what's important is that the game plays very well indeed. There are three skill levels... don't start on number three - it's hard!

At its full package it's not quite as competitively priced as it might have been, but if you are looking for an original and challenging arcade game, this could be it.

Program *Disc of Death*
Price £6.95
Micro Spectrum
Supplier A&E Computing
Main Street
Bromborough
Dunstable

Amstrad and on a three part time is possible.

There are other facilities like transposition and a preset rhythm and altering the sound volume has been kept to the business of tidying with the envelope shape.

It's quite a well designed package and for those with no knowledge of music it's a relatively cheap buy.

Program *Toolbox 2*
Price £6.95
Micro Amstrad
Supplier Camel/Micros
Highgate,
Hillway Ave
Exeter

| Program | Type | Micro | Price | Supplier |
|-----------------------------|------|--------------|--------|-------------|
| <i>The Worm in Paradise</i> | Ad | Amstrad | £9.95 | Level 9 |
| <i>Physics Revision</i> | Ed | Amstrad | £14.95 | Amsoft |
| <i>Formula</i> | S | Amstrad | £1.95 | Microtronic |
| <i>Chemistry Revision</i> | Ed | Amstrad | £14.95 | Amsoft |
| <i>Web War</i> | Ad | BBC | £5.95 | Microsoft |
| <i>The Worm in Paradise</i> | Ad | Commodore 64 | £9.95 | Level 9 |
| <i>Music Asteroid</i> | Ad | Commodore 64 | £24.95 | US Gold |
| <i>Toolbox 2</i> | Ad | Commodore 64 | £6.95 | Microphone |

| Software | Ad | Commodore 64 | Price | Supplier |
|--|----|--------------|--------|-------------------|
| <i>Underlings</i> | Ad | Dragon 32 | £3.95 | Marsden |
| <i>Crash</i> | Ed | Dragon 32 | £3.95 | Marsden |
| <i>Maze Game</i> | Ed | Dragon 32 | £3.95 | Marsden |
| <i>Monster's Quest</i> | Ad | Dragon 32 | £7.95 | Dragon 32 |
| <i>Star Wars 2</i> | Ad | Dragon 32 | £7.95 | Dragon 32 |
| <i>Jet Set Willy</i> | Ad | MEX | £7.95 | Software Projects |
| <i>MSA Pathfinder Accounts Payroll</i> | Ad | MEX | £11.95 | Accounts Payroll |
| | Ad | PC486 | £19.95 | Software Projects |
| | Ad | PC486 | £19.95 | Software Projects |



ON THE ROAD

I'm not going to spend too much time talking about *35 Cloned Pairs*—one of the new Random Field ranges for the *Reservoir* magazine. We've all seen what the *Arctostaphylos* can do when programmed well—its *Ulmus*/Carpinus and many others—it's such a pity that there is such a lot of unprogrammed drivel for them—some of it produced by *Reservoir* itself.

Arnold clearly regards 10 Grand Prix as 'something a bit special', as when it arrived on my desk, it was up and running faster than you can say 'you cannot be serious'. Now I'm a 1.10 Seven-man speed... quite a considerable really, as it took exactly the time to realize exactly how wonderful it is.

1 parameter - it got worse. None of the complaints in Pole Position - there is no impression of speed and challenge. None of the realism of Rave - the car maneuvers like a tank and the control

others are more like moving brick walls. There is some pretty background swirling — but what's the use of the icing if there isn't a cake to put it on in the first place? I think everyone concerned would do well to forget about that one.

| | |
|-----------------|--|
| Program | 3D Grand Prix |
| Price | \$2.95 |
| Micro | Amstrad CPC's |
| Supplier | Amsoft Brentwood House 100 Kings Road Brentwood Essex Chile 41P |

WAKE UP

When the MSX machines started appearing here the only one I managed to snag was an outstationer for was the Yamaha CDS MSX Synthesizer. This wonderful machine lets you create music in up to eight parts using the same sort of sound chips as utilized in the famous in the famous D01 - which put about everybody from James Last to Philip Glass has at least one of.

It seems though that even the CTR hasn't been doing too well and if you look around you'll find some excellent discounts in the specialist music shops. Having had one for a while I can only suggest that if you like making music you go out and buy one immediately!

The justification for all the savings is the fact that Forme must have released a music writing package for the CDX which would seem, at first glance, merely to duplicate what's available on Yamaha's

Abstract

In fact the FM Masterwin is a rather different entity, which turns the GSC into a flexible CMC rather than a tool for serious computing. This has some good as well as bad aspects but certainly the package does not use the machine as often full.

And points first, you are stuck with 3/4 or 4/4 as a rhythmic choice (where would this leave *Stanzinsky*?). You cannot use sounds you have created yourself and are stuck with the sometimes dodgy presets, and you have to use fixed chords - your own, notated music has to be *musical*.

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almost infinite musical variety using eight notes, it seems absurd that it should be so restricted. However, this package does have one obvious advantage - it is a lot easier to use than the Commodore program probably because you don't have to insert each chord or write in the composition notes.

The program is divided into two sections, editing of the source which you submit, and the actual notes, his directions, key signatures, etc. Page Two concerns rhythm and repeats. Whether it is the usual mixture of Dase/Dase, dypt, staccato - Hano. With, etc. a marginal improvement over the ECR's existing process. There are similar pages for chords and general musical parameters like key signature and tempo.

Instructions like *Play All* or *Search on Wacky Rhythms* are inserted onto the screen at the appropriate place. Although it is easy to use and the musical is also clear, the total effects tend to have a sort of home organ feel about them, probably because of those rhythms, or it's the *Polka-Gloss Polyrhythmic* dancey tunes that loop in. If you feel in need of a very basic, very happy package that will do a lot of musical work for you, albeit with slightly limited results, this is worth looking at.

| | |
|----------|--|
| Program | JM Manuscript |
| Price | \$29.95 |
| Micro | CAS |
| Supplies | Enter Macr J4 Incompro Cena Edgeware Molex |

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New Message: is designed to let games know what software is running on the machine. It also lists all other games on disk which you are open to install and a copy and manufacturing details to New Release, Popular Computing Weekly, 10-15 Little Newton Street, Cambridge, MA 02142.

Architects: 15 Holly House, Marylebone Road, London NW1 6JL. Tel: 01-494 1788. **Structural Engineer:** 188 Kings Road, Brentwood Essex. 0273 830455. **Architects:** Peter Arlt, David Baker, Brentwood, Suffolk. 01455 8161. 0481 62000. **Digital Integration:** Winchester Data Centre, Winchester Road, Camberley, Surrey. 0118-341. 0200-584608. **Entrepreneur:** 21-23 Gordon Street, London. 01 444 1000. 04-726 4222. **Interior:** 73 Alcock Road, Moseley, Birmingham. Tel: 091 881 328. **Highland Road:** High Wycombe, Bucks. HP13 9PD. 0494 6871. **Marble:** Marcorum Cottage, Harpenden Road, Hemel Hempstead, Great Watlington, Bucks. HP13 0DQ. **Marble:** 100, 102, 104, 106, 108, 110 Park Road, London NW11 3JL. 01-461-

55-6 **Michigan**, 37 Broadway Road, London NW4 3LA, 01-880
5471. **Mississippi**, 20 S. The Wynans Center, Watson Road,
Brockton, Mass 01924 USA, 0617-3777. **Minnesota**, Washington
Hill Road, Oxford OX3 9BW, 08456, 01-4916. **Missouri**, Pegasus Center,
Glenfield, Newfields-Ligon-Tyng NEV 530, 081 284 7077. **Montana**,
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Livingston 125 787, 054 904 5393. **Netherlands**, 10 Gold, 010 30, 70
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Gemeente, 6-4 Devoen Yord, Eindhoven Road, 1200 010 4071 2100.



Intelligent woman

George Bernard Shaw found a mass market for his plays and philosophy, and he suggested that part of his success was due to phrasing his arguments so that they would be understood by an imagined "typical" reader.

That reader he described as "an intelligent woman", and he even wrote a pamphlet entitled *The Intelligent Woman's Guide to Socialism* which, despite the title, was intended to be read by everybody.

Perhaps the home computer industry could benefit by copying Shaw and appealing to the "intelligent woman"; it may be the only way to avoid the depressing fate of becoming just another specialist male interest with an over-dwelling band of loyal devotees.

There is absolutely no evidence to indicate that the microcomputer industry as a whole gives a woman's thought to its almost exclusively masculine appeal, but should it do so it would use the inevitability of the current "boy's toy" image. Humorous clues, lighter aircraft simulations and wordlock armies all appeal directly and unapologetically to the youthful male imagination. It is a strange fate for the mathematically pure and endless counting engine that is the microchip.

When the copywriting lads first set out to woo consumers to the wonders of microtechnology all sorts of promises were made on behalf of computers. What was not taken fully into account was that a typical system of

computer, tape recorder and television was good for almost nothing except playing arcade games.

The last 18 months have seen the most profitable sector of the computer game. Clever machine code, links with personalities from the entertainment world and multi-thousand pound marketing have attracted a public who think they are "computing" when in fact they are only playing games. Home computers are the most exciting development in entertainment since the invention of television, but playing games should not be seen as something special just because it involves a computer, and home computers should not be seen as purely games machines for teenage boys.

In response to mild protest from alienated women, some software houses issued programs specifically aimed at the "female" market, but computerized cooking and address chip keeping systems have rightly been exposed as patronizing as well as a waste of time.

However, just while home computing appeared to be resigning itself to becoming an essentially masculine hobby, a radical change in direction took place.

The market has stopped expanding upwards and has now started to move upwards: home computers have become useful. The latest machines - like the Amstrad 6100 - have large memories, fast storage, reliable hardware and fine business software.

Time now have now got computers/diskminisystems/packages within the reach of most pockets.

The result is a substantial increase in computer ownership from people who would not consider themselves to be computer literate, but who nevertheless have a use for wordprocessors, spreadsheets and databases and who may even be tempted eventually into buying a chess game or a good adventure.

The functional computer system, then, is the trend which is developing from the fringe of the last year and a half.

Computers are at last beginning to appeal to the intelligent woman.

Mike Lloyd

Dicey business

Puzzle No 101

In the "guess" row below, a two-digit number is multiplied by a single-digit number. To the resulting two-digit product is added another two-digit number which gives a final result, also of two digits.

$$\begin{array}{r} \\ \times \\ \hline \end{array} = (\text{guess})$$

$$\begin{array}{r} \\ + \\ \hline \end{array} = (\text{guess})$$

$$\begin{array}{r} \\ + \\ \hline \end{array}$$

$$\begin{array}{r} \\ + \\ \hline \end{array}$$

$$\begin{array}{r} \\ + \\ \hline \end{array}$$

If the stars are replaced by the correct digits it will be found that each of the nine digits 1 to 9 has been used once and once only.

Can you fill in the correct values?

Solution to Puzzle No 120

For any given starting point, counting round the circle of words as described, a specific letter would be achieved. The program below runs each of the positions 1-24 starting positions and prints out each respective word. If these results are examined it will be seen that the only letter that is duplicated by consecutive start points is a score of six. (The start points are: 10 and 18, 20 and 28, 11 and 19, and 120 and 126.)

```
10 200 21000 110000
18 200 21000 110000
20 200 21000 110000
28 200 21000 110000
11 200 21000 110000
19 200 21000 110000
120 200 21000 110000
126 200 21000 110000
```

This does not determine my sign exactly, but this was not asked for!

Winner of Puzzle 120

The winner is Don Macdonald of Chigwell, Essex, who answers E.E.

Rules

The closing date for Puzzle 101 is November 21.

The Hackers

Copying another student's work than even is a very serious offence.



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